

THE TAIL OF A COMET.

Its Ever Changing Head and Why It Moves From the Sun.

The tail of a comet is not formed of the same particles which composed it yesterday or even an hour or a moment ago. It is constantly being renewed at the expense of the nucleus. As the long stream of black smoke from the neighboring factory or mill is being continually renewed by fresh particles of carbon released by the combustion going on in the furnace below, so is the wonderful luminous trail of cometary bodies being constantly replenished by particles flying from, or rather driven from the nucleus by the intense heat of the sun.

Then, again, how infinitely small and how intensely luminous must these particles that go to make up the tail of a comet be! This thought is suggested by the fact that it has been proved that in some cases the nucleus of comets which are only a few hundred miles in diameter will have enormous fanlike tails stretching across space for a distance exceeding 200,000,000 miles and having a bulk exceeding that of the sun by more than 10,000 times! Professor E. B. Barnard beautifully illustrates the formation of a comet's tail by "supposing" thus: "Suppose, for example, that the nucleus of a comet is composed of ice. Then suppose the heat of the sun to be so intense as to rapidly melt that portion of the ice globe exposed to the action of its rays, which are strong enough to immediately convert it into vapor, which ascends toward the sun.

"Imagine now a fierce wind blowing out from the sun, causing the vapor which meets it to be whirled into space behind the comet. This will clearly illustrate the theory of the formation of a comet's tail, one in which the nucleus of the comet is not ice and the vapor is not water vapor, neither is the force which drives it away from the sun a fierce wind."

The unknown force hinted at by the astronomer above, quoted readily explains why a comet's tail, as a rule, points in an opposite direction to the sun. The Russian astronomer Bredichin distinguishes three different types of cometary tails—those composed of particles having the specific gravity of hydrogen, those having the specific gravity of hydrocarbon gas and a third class having all the peculiarities of an equal mixture of hydrogen and iron vapor.

BEAUTY SPOTS.

Japanese women gild their teeth. In Greenland women paint their faces blue and yellow.

The ladies of Arabia stain their fingers and toes red.

In India the women of three high castes paint their teeth black.

Borneo women dye the hair in fantastic colors—pink, green, blue and scarlet. A Hindoo bride is anointed from head to foot with green and saffron.

In New Holland scars made carefully with shells form elaborate patterns on the ladies' faces.

In some South American tribes the women draw the front teeth, esteeming as an ornament the black gap thus made.

In New Guinea the ladies wear nose rings, piercing the nose in the same foolish way that civilized women pierce the ears.—Philadelphia Bulletin.

His Wedding Clothes.

Lord Ellenborough once reproved a bricklayer for coming to be sworn in his usual habiliments. "When you have to appear before this court it is your bounden duty to be clean and decent in your appearance." "Upon my life, if it comes to that," said the bricklayer, "I'm every bit as well dressed as your lordship." "How do you mean, sir?" exclaimed the chief justice angrily. "Well, it's just this. You come here in your working clothes, and I come in mine."

It was very seldom, however, that anybody got the better of Lord Ellenborough. A witness dressed in a fantastical manner and who had given discreditable evidence was asked in cross examination what he was. "I employ myself," he said, "as a surgeon." "But does any one else?" inquired the chief justice, "employ you as a surgeon?"

He Stopped to Conquer.

English newspapers tell of a young cabinman in Birmingham who by his resemblance to her dead son attracted the fancy of a wealthy old woman. She bequeathed him a fortune on condition that he became an honest gentleman. The cabinman studied the classics enough to fit himself for Oxford or Cambridge, but doubted whether he knew enough of the manners of young gentlemen to conduct himself properly in their society. So, putting pride in his pocket, he obtained a place as "scout," or servant, at one of those seats of learning and profited so much by what he saw and observed in the humble position that when he eventually proceeded to the other university as a student he was able to pass creditably.

Cast Iron.

Cast iron is extended the five thousand five hundredth part of its length for every ton of direct strain per square inch of its section. Its elasticity is fully excited when extended the one-thousandth part, and the limit of its elasticity is estimated to be found at the time when it is extended the one-thousandth and two hundredth part of its length. The tensile strength of the longest piece of cast iron ever tested was 25,970 pounds to the square inch.

Bringing Home.

Husband (nearly married)—Don't you think, love, if I were to smoke it would spoil the curtains? Wife—Ah, you are really the most foolish and thoughtless husband I have ever known. Certainly it would. Husband—Well, then, take the curtains down.

MENTAL REACTION.

The Mind's Quickness of Operation and How It is Measured.

Let a dozen or twenty persons take hold of hands in a ring. Each is to press the hand of his right hand neighbor as soon as he receives a pressure from the left. One person starts the pressure going and at the same instant observes the position of the second hand of a watch. The pressure passes all around the circle, and when it arrives at the originator he notes how many seconds were required for the given number of persons in succession to receive an impression and make up their minds to act in response. The total time is then divided by the number of persons. This is a crude illustration of the reaction time which we measure with great accuracy on single persons.

As the mental portion of the reaction time becomes more complicated the time becomes longer. For example, the processes of mental discrimination and choice require times of their own. The way we get these "higher" mental processes can be illustrated in a simple way. A person placed in a quiet room is to tap a telegraph key every time he sees a red light, which can be produced at the will of the experimenter in the adjoining room. The interval of time between the actual appearance of the light and the moment the key is tapped is accurately measured. For awhile nothing but the red light is used, this to obtain the simple reaction time. Then red and yellow lights are turned on in irregular succession. The person has now to discriminate between two colors and to choose between action and nonaction. The increase of time required over the simple reaction time gives the discrimination time for two colors. In another set of experiments three colors are used, then four colors. As the discrimination and choice become more complicated more time is required.

The importance of rapid and accurate reaction and discrimination is evident. Astronomers have difficulty in recording the moment at which a star passes a line in the telescope. The sportsman must pull the trigger at just the proper moment. The football player, the fencer and the boxer are trained in rapidity of discrimination and reaction. It is very evident that a player or a pugilist who takes a long time for discrimination, choice and volition will give a decided advantage to a quick opponent.—Forum.

DISRAELI'S MAXIMS.

Every one loves power, even if he does not know what to do with it. Always have distinguished friends. Never have fools for friends. They are of no use.

To govern men you must either excel them in their accomplishments or despise them.

To rule men we must be men. Our wisdom must be concealed under folly, and our constancy under caprice.

Next to knowing when to seize an opportunity the most important thing in life is to know when to forego an advantage.

The divine right of kings may have been a plea for feeble tyrants, but the divine right of government is the keystone of human progress.

Talk to women as much as you can. This is the way to gain fluency, because you need not care what you say and had better not be sensible.

They Didn't Play.

A monster political parade was held in Philadelphia during one of the campaigns. It was headed by a band of thirty-five discouraging stirring marching tunes. The leader of the band had contracted in advance to supply that many players, but when he came to count noses he found eight missing. It did not take him long to decide what to do. After some long deliberation he secured eight men, not one of whom could play a note of music, and decked them out in the regulation band uniform. He placed instruments and music in their hands and paraded the full number. "Did they play?" was asked. "Yes," said the band leader, "but not music. I put a cork in each of the eight instruments."

Sensible.

That was both a kind and a wise man who, when about to marry for the second time, settled \$10,000 upon his unmarried daughter. "I should like to have her go on living at home," he said, "but who can tell whether she and her stepmother will be harmonious and quite happy together? She shall feel that she is free to go or stay." The consequence was mutually happy relations, since both women knew there was no dependence or necessity for them to live in closer relations than might prove agreeable.

The Dominant Air.

As through an opera runs the rhythm of one dominant air, so through men's lives there rings a dominant note, soft in youth, strong in manhood and soft again in old age. But it is always there, and, whether soft in the gentler periods or strong amid the noise of the perihelion, it dominates always and gives its tone to the whole life.

His Happiest Hour.

He—Do you remember the night I asked you to marry me? She—Yes, dear. He—For a whole hour we sat there and not a word did you speak. Ah, that was the happiest hour of my life.—Translated for Tales From Echo de Paris.

Pain Through Ignorance.

All our misery, all our pain, is traceable to ignorance and misuse of our forces. Enlightenment is the sovereign cure alike for physical and moral ills.—Horatio W. Dresser.

LITHOGRAPHY.

The Peculiar Accident by Which It Was Discovered.

One of the greatest discoveries ever made was the result of the purest accident. It was the year 1796. The citizens of Munich had just witnessed the first triumphant performance of Mozart's opera "Don Juan," and the theater was deserted by all save one man, Alois Sennefelder, who, after making a round of inspection in the building to see that no sparks had ignited anything combustible, retired to his room to stamp the tickets of admission for the day following. When he entered his apartment he had three things in his hand—a polished whetstone which he had purchased for sharpening razors, a ticket stamp still moistened with printing ink and a check on the treasurer of the theater for his weekly salary. As he placed the latter upon the table a gust of wind swept it high up in his room for a moment and then deposited it in a basin filled with water.

Sennefelder dried the wet paper as well as he could and then weighted it down with the whetstone, upon which he had before carelessly placed the stamp. When he returned to his room the following morning he was astonished at seeing the letters of his stamp printed with remarkable accuracy upon the dampened paper. A thought came to him. He wondered whether by some means he could not simplify his work of continually copying the songs of the chorus. He went out and purchased a large stone, commenced making experiments and, as we all know now, finally discovered the art of printing from stone—lithography.

EXECUTION OF SPIES.

The Way the Death Sentence is Carried Out in England.

The ceremony of disposing of a condemned spy in the English army always follows a definite precedent. The unfortunate man is surrounded by a detachment of infantry, and after he is provided with a pick and shovel he is marched off to a selected spot and ordered to dig his own grave. This done, the tools are taken from him and his eyes are bandaged. The attending chaplain reads portions selected from the burial service, and from the ranks of the escort twelve men are selected at random by the officer in charge. These men, having stacked their own rifles, are led to where two other rifles are available, then six of which are loaded with blank cartridges. One of these is handed to each man, so that no one knows whether the rifle he holds contains a bullet or not and none can say for certain that the shot fired by him killed the prisoner. The firing party then marches to an appointed position. The commands "Present!" "Fire!" are given, and almost before the last word rings out the volley is fired and the spy falls into the grave he has dug. Nearly every man is more or less affected on being selected to form one of the firing party, and many men have been known to faint away on being singled out by the others are so overcome as to be scarcely able to pull the triggers of their rifles.

For Over Sixty Years.

Mrs. Winslow's Soothing Syrup has been used for over 60 years by millions of mothers for their children while teething, with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for Diarrhoea. It will relieve the poor little sufferer immediately. Sold by Druggists in every part of the world. Twenty-five cents a bottle. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind.—Advt.

Carpet Cleaning.

Now is the time to clean carpets. If you want your carpets taken up, cleaned and relaid, send word to D. Douglass, No. 9 Park street, Montclair. Mr. Douglass has had years of experience in carpet cleaning, and has a large patronage in this town, Glen Ridge and Montclair. Those intending to move can have their carpets taken up, cleaned and relaid on short notice. The work will be well and promptly done.—Advt.

Odorous Excavating.

Licensed by Board of Health. Odorless Excavating orders promptly tended to at reasonable rates. Apply to or address RICHARD MAXWELL, No. 15 Clinton Street, Bloomfield. Telephone No. 59-a.—Advt.

Estate of MICHAEL CUMMINGS.

November 15, 1905. Pursuant to order of George E. Russell, Surrogate of the County of Essex, this day made, on the application of the undersigned, executors of said deceased, notice is hereby given to the creditors of said deceased to exhibit to the undersigned under oath, or affirmation their claims and demands against the estate of said deceased, within nine months from this date, or they will be forever barred from prosecuting or recovering the same against the undersigned.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

JOHN OWENS, JOHN CUMMINGS, Executors.

JOHN MONTHEITH, Executor.

See the
INDIAN
VILLAGE
This Week.

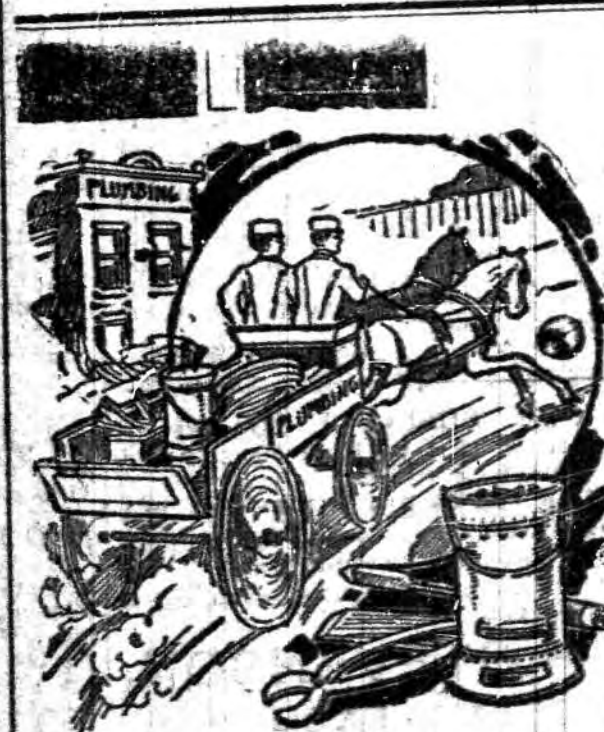
Hahne & Co.
Broad, New and Halsey Streets
NEWARK.
Store Closes 5.30 P. M., excepting Saturdays.

1906
of dories
are Ready.

7 GOOD REASONS WHY YOU SHOULD SHOP AT HAHNE & CO.'S, Newark's Store Beautiful.

- 1 Stocks are Enormous.** as complete as in the best of New York City Stores, and many departments are more thoroughly stocked and goods are more advantageously displayed than in any store in America. Qualities are as high and cover a wider range of grades than in most of the big stores of the country, meeting practically every purse without dragging quality to a low level.
- 2 Styles of Goods and garments** are strictly up-to-date and far in advance of the average store, vying with the most exclusive metropolitan shops. Our buyers are the only ones in New Jersey who are sent abroad to work in conjunction with our Paris representatives and to post themselves on the trend of fashion, and our facilities otherwise for keeping posted are unsurpassed by any dry goods organization in America, making this store a fashion authority.
- 3 Time is Saved** the shopper at this establishment because of the completeness, variety and convenient arrangement of the stocks, the bringing together into one harmonious whole practically 100 full-fledged stores under one roof, making it easy to get anything needed for personal or home adornment in the one store.
- 4 Money is Saved**, first, because, by being able to make many purchases under one roof, your time is saved; secondly, by having a large corps of the most skilled managing buyers and handling such immense quantities of merchandise, we secure advantages that do not accrue to lesser concerns, enabling us to sell dependable grades of goods at the lowest possible prices at all times.
- 5 Conveniences and comforts** are provided our patrons almost with prodigality. Perfect ventilation, the many broad, roomy, light, airy aisles throughout the establishment, the ten large, airy, speedy elevators, the mezzanine floor rest rooms, with their easy chairs, writing desks, etc.—the elaborate toilet rooms, the nursery for the children, the temporary hospital, with its cots and trained nurses, the splendid restaurant, the smoking room for men, all contribute in a very material way to your comfort.
- 6 Safety in Shopping** here is absolute, and in a dual way. First, there is safety in purchasing anything we sell, the qualities being the highest obtainable for the money, and the privilege of returning unsatisfactory goods being always extended to you unless so specified at time of sale. Second, the building is absolutely fireproof in its construction—the only store of its kind in all New Jersey. It has great entrances and exits on three streets, stairways aplenty conveniently located, every appliance for the prompt extinguishing of an incipient blaze; the elevators are of the latest modern construction, all metal, and with powerful hydraulic supports, making it impossible for an elevator to fall.
- 7 Local Pride**, not only of New Yorkers, but of all Jerseymen, in one of the grandest, one of the largest, and admittedly the most skillfully planned, best arranged and most complete mercantile establishment in the world, should be sufficient in itself to impel you to do your trading here. This store is an institution worthy in every way of the patronage of the most conspicuous as well as the most humble of the citizens of New Jersey, for HAHNE & CO.'s is

A STATE STORE.



Getting There Promptly

is one of the things we do in our work. Doing things right after we get there is another. We use expert labor and first class material.

We Like to Estimate on new work, and will be glad to have you call on us.

Arthur & Stanford,
547 Bloomfield Avenue.

PUBLIC SCAVENGER
Licensed By Board of Health.

Parties desiring to make contracts to have their premises kept clean of ashes, refuse, and garbage, can make favorable arrangements with
EDWARD MAXWELL
Office: 15 Clinton Street,
Telephone No. 59-a.

BLOOMFIELD News Depot.

EARLY DELIVERY.
SATISFACTION GUARANTEED.

A Full Line of the Best Brands of
Imported and Domestic
CIGARS,

from Acker, Merrill & Condit,
D. Osborne & Co., Wilkinson,
Gaddis & Co.

GARLOCK & MISHELL
Newsdealers,
276 Glenwood Avenue
Opp. D. L. & W. Station.

America's Best Coffee,
Mocha and Java,
25c per lb.

Don't buy stamps and get poor Coffee. Get a rich, fine flavored, heavy bodied Coffee and pay only 25c for it.
Don't Fail to Try This COFFEE.

R. T. CADMUS,
595 Bloomfield Avenue
PHONE L. P. 595; Local 62.

Benedict Bros.

WATCHES, DIAMONDS AND RICH GOLD JEWELRY.

"Benedict's Time" is Standard Time and Our Trade Mark.

The Watch and Jewelry House of Benedict Bros. was established in Wall Street in 1819 by Samuel W. Benedict, the father of the present Benedict Bros., which makes it probably the oldest in their line in this country. The present Benedicts removed to the corner of Cortlandt Street in 1858.

They are now located at the corner of Broadway and Liberty Street, where they have the most attractive jewelry store in the United States and, perhaps, in the world.

An early inspection of their magnificent and extensive line of fine Watches, Diamonds and other Precious Gems is cordially invited.

Try "The Benedict" Patent Sleeve and Collar Button.

BENEDICT BROTHERS

JEWELERS,
141 Broadway, cor. Liberty St.,
NEW YORK.

PROVIDENT SAVINGS LIFE ASSURANCE CO. OF NEW YORK

Is one of the Old Line Companies, over 30 years old, has paid to beneficiaries thirty-two millions of dollars since organization, and issues all the improved forms of Policies, with broad and liberal conditions.

JESSE C. GREEN,
General Agent for Northern New Jersey. Special arrangements will be made with members of the Royal Arcanum desiring to change. ESTIMATE GLADLY FURNISHED.